

REMARKS

Claims 1, 2 and 5-13 are all the claims pending in the application. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claims 1-13 under §103(a) as being unpatentable over US Patent 5,825,543 to Ouderkirk et al. (hereinafter Ouderkirk). Applicants respectfully traverse this rejection because the references fail to render obvious Applicants' claims.

Claim 1 sets forth a light diffusing plate comprising a birefringent film containing dispersed therein minute regions differing from the birefringent film in birefringent characteristics, wherein a difference in refractive index between the birefringent film and the minute regions in a direction perpendicular to an axis direction in which a linearly polarized light has a maximum transmittance, Δn^1 , is 0.03 or larger, and further wherein the minute regions are dispersedly contained in the birefringent film by phase separation and each has a length in the Δn^1 direction of from 0.05 to 500 μm .

In contrast to that in claim 1, Ouderkirk fails to teach or suggest Applicants' claimed length of the particles in the Δn^1 direction of from .05 to 500 μm . Instead, Ouderkirk discloses that the length of the particles is greater than the wavelength of electromagnetic radiation of interest divided by 30, and that through the specification the wavelength of interest is that of the visible spectrum. See: col. 9, lines 28-67; and col. 15, lines 1-7. Accordingly, because the wavelength of the visible spectrum ranges from .430 μm to .690 μm , the length of Ouderkirk's particles is greater than .0143 to .0231 μm . But Ouderkirk does not disclose an upper limit on the length of the particles. Accordingly, Ouderkirk's range of particle length overlaps that set forth in claim 1.

But Applicants have disclosed the importance of their claimed range. That is, as set forth on page 15, line 13 to page 16, line 10, the claimed range is the result of balance between achieving backward scattering and diminishing the wavelength dependence of scattered light. That is, in order to induce and enhance backward scattering, it is preferred to regulate the Δn^1 direction diameter of the minute regions to a size which causes Rayleigh scattering, that is, to a

size sufficiently smaller than the wavelengths of the light to be used. On the other hand, in order to diminish the wavelength dependence of scattered light, the Δn^1 direction size of the minute regions is preferably as large as possible. Accordingly, the claimed range represents a tradeoff in these considerations.

And a *prima facie* case of obviousness based on overlapping ranges can be overcome by showing the criticality of the claimed range. Accordingly, because Applicants have shown the criticality of their claimed range, this rejection should be withdrawn.

Further, however, the Examiner makes the bald assertion that “[t]he range claimed by Applicant for the length of the dispersed liquid crystal polymer particles is very broad and virtually non-limiting. The length of conventional liquid crystal polymer particles is well within this range.” It thus appears that the Examiner tries to take official notice of the length of the liquid polymer crystals. Accordingly, Applicants respectfully request that the Examiner come forward with evidence to support this assertion. That is, an Examiner may not rely on official notice, or judicial notice, or a mere statement of obviousness at the exact point where patentable novelty is argued, but must come forward with pertinent prior art. See *Ex parte Cady*, 148 U.S.P.Q. 162 (Bd. of App. 1965).

For at least any of the above reasons, Ouderkirk fails to render obvious Applicants’ claim 1. Likewise, this reference fails to render obvious dependent claims 2 and 5-13. However, Applicants respectfully traverse this rejection as it applies to claims 2 and 6 for the following additional reasons.

With respect to claims 2 and 6, there is no motivation to combine the references as suggested by the Examiner. That is, the Examiner asserts that the chemical composition of the thermoplastic liquid crystal polymer is “well known and obvious for showing liquid crystal characteristics”.¹ However, a statement that modifications of the prior art to meet the claimed invention would have been “‘well within the ordinary skill of the art at the time the claimed invention was made’” because the references relied upon teach that all aspects of the claimed

¹ Office Action at page 2, last 4 lines.

invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Here, the Examiner asserts that because liquid crystal polymers are well known, it would have been obvious to use such a material in Ouderkirk. However, the Examiner provides no motivation for doing so.

Information Disclosure Statement (IDS)

On December 21, 1999, Applicants submitted an IDS citing one US Patent and three foreign patent documents. However, despite the reminder in the previous response, the Examiner again has not returned an initialed copy of the PTO form-1449 submitted with the December 21 IDS. Therefore, Applicants respectfully request that the Examiner return a properly initialed copy of the PTO form-1449 with his next Office Action.

Conclusion

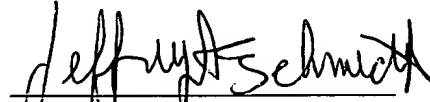
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
U.S. Appln. No. 09/468,085

Atty. Dkt No. Q57340

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 3 and 4 have been canceled without prejudice or disclaimer.

The claims have been amended as follows:

1. (Amended) A light diffusing plate comprising a birefringent film containing dispersed therein minute regions differing from the birefringent film in birefringent characteristics,

wherein the minute regions comprises a thermoplastic liquid-crystal polymer, and difference in refractive index between the birefringent film and the minute regions in a direction perpendicular to an axis direction in which a linearly polarized light has a maximum transmittance, Δn^1 , is 0.03 or larger and that in said axis direction, Δn^2 , is not larger than 80% of the Δn^1 , and

further wherein the minute regions are dispersedly contained in said birefringent film by phase separation and each has a length in the Δn^1 direction of from 0.05 to 500 μm .

8. (Amended) A light diffusing plate according to claim [4] 2, wherein two or more birefringent films [which] are superposed on each other so that the Δn^1 directions of each of the birefringent films are parallel to those for one or two of the adjacent layer.